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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------------|------------------|
| 10/648,918 | 08/27/2003 | Katsuhiko Miya | P/1250-258 | 5086 |
| 2352 7590 04/24/2007 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403 | | | EXAMINER MACARTHUR, SYLVIA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1763 | |

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 04/24/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/648,918 | MIYA ET AL. | |
| | Examiner | Art Unit | |
| | Sylvia R. MacArthur | 1763 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/13/2007 has been entered.

Response to Arguments

2. Applicant's arguments filed 2/13/2007 have been fully considered. It was found that the prior art of Miyazaki or Matsuyama fail to teach the present invention. The arguments of 7/3/2006 regarding the prior art of Taniyama et al were discussed. Therein applicant argues that Taniyama et al fails to anticipate an atmosphere blocking member as it does not correspond in shape and size to the substrate. However, this argument related the claimed apparatus to a workpiece or substrate which it works upon. Recall, an apparatus is what it is and not what it works upon. The courts have held that the inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F. 2d 966, 25 USPQ 69 (CCPA 1935) (as restated *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)). Also, that if applicant amends the claims to recite the shape of the blocking member, it has been held by the courts that the shape of an article or apparatus is a matter of choice which a person of ordinary skill in the art would have found obvious absent persuasive evidence that the particular shape was significant. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

In the case of Taniyama et al, Fig.3 illustrates that the blocking member 31 moves such that the blocking member is inherently capable of being arranged eccentrically to a center of the surface of the substrate. Furthermore, the outer gas discharge port formed on the blocking member is continuously and annularly enclosed the inner gas discharge port, see Figs. 6-8.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 6,7, 9, 10, and 19-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Taniyama et al (US 6,247,479).

Regarding claims 1, 20, and 21: Taniyama et al teaches a blocking member 31 with a plurality of nozzles 40-42, see Figs. 7-8 and 11. Cols. 9 lines 60- col. 10 lines 1-15 recite that the chemical solution is discharged from nozzle 40, water 41, gas 42, and nitrogen 44.

Regarding the limitation that the atmosphere blocking member does not correspond in shape and size to the substrate, this is interpreted by the examiner as a matter of an intended use. However, this argument related the claimed apparatus to a workpiece or substrate which it works upon. Recall, an apparatus is what it is and not what it works upon. Additionally, the courts have held that the inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims, *In re Young*, 75 F. 2d 966, 25 USPQ 69 (CCPA 1935) (as restated *In re Otto*, 312 F.2d 937, 136 USPQ 458, 459 (CCPA 1963)).

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Regarding claim 3, 6, 7, 10: See Figs. 7-8 and 11 of Taniyama et al.

Regarding claim 19: Taniyama teaches in col. 7 lines 58-67 that the blocking member rotates.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 5, 8, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniyama et al.

Claim 4: Taniyama et al teaches the use of valves to control the flow of the treatment fluids (gas and liquids). The fluids are independently controlled and thus the delay of introducing the fluids is deemed obvious by the structure of Taniyama et al. The motivation to use the valves is for enhanced independent control of the fluids. Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide a delay of introducing fluids as desired by using the valves as valves allow for flow control.

Regarding claims 5 8, and 9: Taniyama et al fails to teach the flow rate of the gas in the outer port is larger than the inner port. However, the gas flow rates are controlled by valves that can be adjusted to ensure an optimal level of gas is provided to ensure the desired product result. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the

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optimum or workable ranges by routine experimentation in the absence of a showing of criticality. It would have been obvious for one of ordinary skill in the art to have determined the optimum values of the relevant process parameters such as the flow rate of the gas discharged from the inner and outer gas discharge ports.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R. MacArthur whose telephone number is 571-272-1438. The examiner can normally be reached on M-F during the hours of 8:30 a.m. and 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sylvia R MacArthur
Patent Examiner
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April 17, 2007